

PROJECT TITLE : CIGARETTE DEVELOPMENT 1
PERIOD COVERED : SEPTEMBER 26 - OCTOBER 26, 1981
WRITTEN BY : Singer-Z. (ZDS)

303 COUNTRY SF

Objective

To develop a diluted version of the MARLBORO Finland in order to reduce the CO delivery in the mainstream smoke.

Description of samples and results

Using the standard MLF SF blend, the control cigarettes (MLF 03) and two diluted prototypes, differing from each other in the cigarette paper used, were made at ATO. The Benkert Z3/60 tipping paper, combined with the FU-POV 40 L wrap paper, gave a dilution value of 18 %. The trials were arranged to be run one after the other on the same machine.

For a description of the prototypes and their comparison with the standard MLF 03, see the table on the next page.

Comments

- All the physical parameters of our cigarette samples, except for the cigarette diameter, correspond to the specifications.
- Due to the less porous cigarette paper used on prototype No 3, the smoke figures are slightly higher in comparison with those of prototype No 2.

<u>Cigarette paper</u>	<u>Permeability (ml/min/cm⁻²)</u>
TERCIG 08.5 ND 4321	60
TERCIG HI 10 DIN 60	68

- The essential CO-reduction is observed.
- Surprisingly, there is no difference in puff count between diluted and undiluted cigarettes. Theoretically, there should be a difference of about 0.5.
- The taste evaluation is under way.

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PROJECT NAME : C O U N T R Y S F

PROJECT NO : 303

PROJECT LEADER : ZDS

DATE : 10.26.1981

<u>PROTOTYPE NO</u>		1 P	2 P	3 P
<u>BLEND NO</u>		ML003 MLF	ML003 MLF	ML003 MLF
TA	%	1.73	1.73	1.75
NITRATE-NITROGEN	%	0.21	0.21	0.21
REDUCING SUGARS	%	9.7	10.3	10.4
FORMAT : DIAMETER	mm	7.88	7.88	7.87
FILTER LENGTH	mm	20	20	20
CIGARETTE LENGTH	mm	80	80	80
TOTAL WEIGHT	mg/cig.	996	995	996
TOBACCO WEIGHT AT 12 % O.V.	mg/cig.	768	763	762
CIGARETTE RTD	mm WG	99	88	90
DILUTION	%	0	18	18
CIGARETTE PAPER		Tercig H 10 DIN 60	Tercig H 10 DIN 60	Tercig 08.5 ND 4321
TIPPING PAPER		Tertip CDP-S 466 M	Benkert Z3/60	Benkert Z3/60
FILTER : TYPE		Single	Single	Single
TOW		3.4 I / 46'000	3.4 I / 46'000	3.4 I / 46'000
PAPER		Tertip K	FU-POV 40 L	FU-POV 40 L
RTD	mm	57	62	62
TAR	mg/cig.	17.9	15.4	15.8
SN	mg/cig.	1.11	1.01	1.03
CO	mg/cig.	16.8	13.7	13.9
NO	mg/cig.	0.23	0.19	0.20
PUFF COUNT		8.9	8.9	8.9

THE CIGARETTES ARE SMOKED ON A PM 20 PORTS.

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Objective

To develop a diluted version of the MARLBORO AUSTRIA in order to reduce the CO delivery in the mainstream smoke.
DPMI : 16 mg/cig.
SN : 1 - 1.1 mg/cig.

Summary

The present situation and the two possible guide-lines to be followed for achieving the above-mentioned objectives were discussed during the meeting held in Lausanne on October 31st 1981 :

1. The use of the diluted Pan-European MARLBORO which would lead to an increase in the basic blend portion in the MARLBORO AU blend bringing it up to 68 % and the consequent price increase of the latter.
2. The use of the MARLBORO AU for the further introduction of dilution that would require some essential modifications of the cigarette construction or require reinforcement of the tobacco blend currently used in order to achieve the target DPM/SN figures.

Due to cost reasons, the second possibility was chosen and approved. Only the Austrian non-tobacco materials should be considered for the development.

Description of samples and results

The same cigarette construction, provided with discreet filter dilution (electro-perforated Z3/60 tipping paper from Tann combined with Wattens FY-HP-40 K wrap paper) was used for trials carried out using two tobacco blends :

- Standard MARLBORO AUSTRIA (ML 002)
- Modified blend

For a description of the prototypes and their comparison with the standard MLF AU, see the table on a following page.

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Comments:

Only prototype No 2 P using the standard ML 002 blend achieved the objective as far as the CO-reduction, DPM delivery and taste are concerned.

It should be noted that in view of the MARLBORO tobacco situation in Austria, the blend composition will be completely revised and a new leaf formula will be established. Based on the latter, a new series of trials is planned for December/January.

Z. Binger

ZDS/cap/OCTOBER 29, 1981

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PROJECT NAME : C O U N T R Y A U

PROJECT NO : 352

PROJECT LEADER : ZDS

DATE : 10.26.1981

<u>PROTOTYPE NO</u>		1 P	2 P	MLF *
<u>BLEND NO</u>		Modified	ML 002	ML 002
TA	%	1.51	1.49	1.49
NITRATE-NITROGEN	%	0.23	0.23	0.23
REDUCING SUGARS	%	8.9	8.9	8.4
FORMAT : DIAMETER	mm	7.93	7.94	7.95
FILTER LENGTH	mm	20	20	20
CIGARETTE LENGTH	mm	79	79	80
TOTAL WEIGHT	mg/cig.	1036	1054	1045
TOBACCO WEIGHT AT 12 % O.V.	mg/cig.	794	813	816
CIGARETTE RTD	mm WG	102	100	118
DILUTION	%	18	18	0
CIGARETTE PAPER		WP 60	WP 60	WP 60
TIPPING PAPER		Tann Z3/60	Tann Z3/60	Tann non-porous
FILTER : TYPE		Single	Single	Single
TOW		3.4 I / 46'000	3.4 I / 46'000	3.4 I / 46'000
PAPER		FY-HP-40 K	FY-HP-40 K	FY-100-0.80
RTD	mm	67	66	64
DPM	mg/cig.	15.6	16.1	17.2
SN	mg/cig.	0.94	0.03	1.06
CO	mg/cig.	17.1	15.7	17.0
NO	mg/cig.	0.23	0.23	0.30
PUFF COUNT		9.4	9.6	9.2

THE CIGARETTES ARE SMOKED ON A PM 20 PORTS.

* : C.I.R. 6 - 7

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